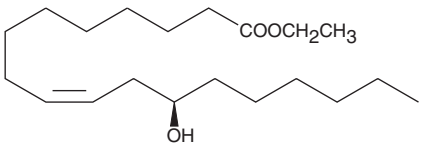
PRODUCT INFORMATION

Ricinoleic Acid ethyl ester

Item No. 10009730

CAS Registry No.: 55066-53-0
Formal Name: (12R)-hydroxy-(9Z)-octadecenoic acid, ethyl ester
Synonyms: (+)-Ethyl ricinoleate, Neoricin, SFE 20:1;O
MF: $C_{20}H_{38}O_3$
FW: 326.5
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ricinoleic acid ethyl ester is supplied as a solution in ethanol. To change the solvent, simply evaporate the ricinoleic acid ethyl ester under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of ricinoleic acid ethyl ester in ethanol is approximately 100 mg/ml and approximately 50 mg/ml in DMSO and DMF.

Ricinoleic acid ethyl ester is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of ricinoleic acid ethyl ester should be diluted with the aqueous buffer of choice. Ricinoleic acid ethyl ester has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ricinoleic acid is a naturally occurring 12-hydroxy fatty acid and constitutes about 90% of the fatty acids in castor oil. It can serve as a substrate for the synthesis of conjugated linoleic acids.[1] Ricinoleic acid ethyl ester is a stabilized, lipid-soluble form of the free acid. It has been used to produce biofuels as well as skin-conditioning agents, emulsion stabilizers, and surfactants in cosmetics.[2,3]

References

1. Salimon, J., Nallathamby, N., Salih, N., *et al.* Synthesis and physical properties of estolide ester using saturated fatty acid and ricinoleic acid. *J. Autom. Methods Manag. Chem.* **2011(263624)**, (2011).
2. Dantas, M.B., Albuquerque, A.R., Soledade, L.E.B., *et al.* Biodiesel from soybean oil, castor oil and their blends. Oxidative stability by PDSC and rancimat. *J. Therm. Anal. Calorium.* **106**, 607-611 (2011).
3. Ogunniyi, D.S. Castor oil: A vital industrial raw material. *Bioresour. Technol.* **97(9)**, 1086-1091 (2006).

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